

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Previously Presented) The optical glass of claim 11 exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, and a viscosity at a liquid phase temperature equal to or higher than 0.4 Pa·s.

2. (Previously Presented) The optical glass of claim 108 exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, and a glass transition temperature equal to or less than 540°C.

3. (Previously Presented) The optical glass of claim 109 exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, and a transmittance λ 80 is equal to or less than 500 nm and a transmittance λ 5 is equal to or less than 385 nm.

Claims 4-10 (Canceled)

11. (Currently Amended) An optical glass comprising as molar percentages, 15-30 percent of P_2O_5 ; 0.5-15 percent of B_2O_3 ; 5-25 percent of Nb_2O_5 ; 6-40 percent of WO_3 ; 4-45 percent of at least one R'_2O selected from the group consisting of Li_2O , Na_2O , and K_2O ; 1-5 percent of K_2O ; 0-30 percent (excluding 30 percent) of at least one RO selected from the group consisting of BaO , ZnO , and SrO ; and 2-9 percent of TiO_2 ; with the total content of the above-stated components being equal to or more than 95 percent, and wherein the optical glass comprises 2-30 molar percent of Li_2O and does not comprise an amount of GeO_2 .

12. (Original) The optical glass of claim 11 wherein said optical glass comprises 0-25 molar percent (excluding 0 molar percent) of BaO .

Claims 13-16 (Canceled)

17. (Previously Presented) The optical glass of claim 11 wherein said optical glass has the composition comprising, as essential components, P_2O_5 , B_2O_3 , WO_3 , Nb_2O_5 , TiO_2 , BaO , ZnO , Li_2O , Na_2O and K_2O or the composition comprising the above essential components and Sb_2O_3 .

18. (Previously Presented) The optical glass of claim 108 wherein said optical glass has the composition comprising, as essential components, P_2O_5 , B_2O_3 , WO_3 , Nb_2O_5 , TiO_2 , BaO , ZnO , Li_2O , Na_2O and K_2O or the composition comprising the above essential components and Sb_2O_3 .

19. (Previously Presented) The optical glass of claim 109 wherein said optical glass has the composition comprising, as essential components, P_2O_5 , B_2O_3 , WO_3 , Nb_2O_5 , TiO_2 , BaO , ZnO , Li_2O , Na_2O and K_2O or the composition comprising the above essential components and Sb_2O_3 .

Claims 20-58 (Canceled)

59. (Previously Presented) The optical glass of claim 11 wherein said optical glass comprises 0-11 percent of BaO .

60. (Previously Presented) The optical glass of claim 11 wherein said total quantity of Li_2O , Na_2O , and K_2O is equal to or more than 29 percent.

61. (Previously Presented) The optical glass of claim 11, wherein said optical glass has a density of oxygen atoms contained in the range of from 4.2×10^{22} to $5.2 \times 10^{22}/cm^3$.

62. (Previously Presented) The optical glass of claim 108 wherein said optical glass has a density of oxygen atoms contained in the range of from 4.2×10^{22} to $5.2 \times 10^{22}/cm^3$.

63. (Previously Presented) The optical glass of claim 109 wherein said optical glass has a density of oxygen atoms contained in the range of from 4.2×10^{22} to $5.2 \times 10^{22}/cm^3$.

Claims 64-69 (Canceled)

70. (Previously Presented) The optical glass of claim 11 wherein said optical glass exhibits a glass transition temperature equal to and/or less than 530°C and a yield point temperature equal to or less than 580°C.

71. (Previously Presented) The optical glass of claim 108 wherein said optical glass exhibits a glass transition temperature equal to and/or less than 530°C and a yield point temperature equal to or less than 580°C.

72. (Previously Presented) The optical glass of claim 109 wherein said optical glass exhibits a glass transition temperature equal to and/or less than 530°C and a yield point temperature equal to or less than 580°C.

73. (Previously Presented) The optical glass of claim 62 wherein said optical glass exhibits a glass transition temperature equal to and/or less than 530°C and a yield point temperature equal to or less than 580°C.

74. (Previously Presented) The optical glass of claim 11 wherein said optical glass exhibits a refractive index in the range of from 1.7 to 2.0, an Abbé number in the range of from 20 to 32.

75. (Previously Presented) The optical glass of claim 108 wherein said optical glass exhibits a refractive index in the range of from 1.7 to 2.0, an Abbé number in the range of from 20 to 32.

76. (Previously Presented) The optical glass of claim 109 wherein said optical glass exhibits a refractive index in the range of from 1.7 to 2.0, an Abbé number in the range of from 20 to 32.

77. (Previously Presented) The optical glass of claim 62 wherein said optical glass exhibits a refractive index in the range of from 1.7 to 2.0, an Abbé number in the range of from 20 to 32.

78. (Previously Presented) The optical glass of claim 11 wherein said optical glass exhibits a liquid phase temperature equal to or less than 970°C.

79. (Previously Presented) The optical glass of claim 108 wherein said optical glass exhibits a liquid phase temperature equal to or less than 970°C.

80. (Previously Presented) The optical glass of claim 109 wherein said optical glass exhibits a liquid phase temperature equal to or less than 970°C.

81. (Previously Presented) The optical glass of claim 62 wherein said optical glass exhibits a liquid phase temperature equal to or less than 970°C.

82. (Previously Presented) An optical part being composed of the optical glass of claim 1.

83. (Previously Presented) An optical part being composed of the optical glass of claim 2.

84. (Previously Presented) An optical part being composed of the optical glass of claim 3.

85. (Previously Presented) An optical part being composed of the optical glass of claim 12.

86. (Previously Presented) An optical part being composed of the optical glass of claim 11.

87. (Previously Presented) An optical part being composed of the optical glass of claim 17.

88. (Previously Presented) An optical part being composed of the optical glass of claim 60.

89. (Previously Presented) An optical part being composed of the optical glass of claim 108.

90. (Previously Presented) An optical part being composed of the optical glass of claim 109.

91. (Previously Presented) An optical part being composed of the optical glass of claim 62.

92. (Previously Presented) A glass preform being composed of the optical glass of claim 1.

93. (Previously Presented) A glass preform being composed of the optical glass of claim 2.

94. (Previously Presented) A glass preform being composed of the optical glass of claim 3.

Claims 95-100 (Canceled)

101. (Previously Presented) A glass preform being composed of the optical glass of claim 62.

102. (Withdrawn) A method of manufacturing glass preforms wherein a prescribed amount of a piece of molten glass flowing out of a flowout pipe is received in a receiving mold to prepare a glass preform made of the optical glass of claim 1.

103. (Withdrawn) A method of manufacturing glass preforms made of the optical glass of claim 1, comprising the steps of :

a molten glass glob is made to fall by causing molten glass flowing out of a flowout pipe to drip naturally or by cutting with a cutting blade;

the molten glass glob is received in a depression in a forming mold, and in the process, air, a nonreactive gas or some other gas is blown out through minute holes in the depressions; and,

a layer of air is generated between the molten glass glob and the inner surface of depression in the forming mold and the molten glass glob is maintained and cooled within the depression in a state of essential non-contact with the inner surface of the depression until at least a portion of the outer surface of the molten glass glob reaches a temperature not greater than the melting temperature.

104. (Withdrawn) A method of manufacturing glass products comprising the steps of:

heating the glass preform prepared by the method of claim 102; and
precisely press molding the heated glass preform to obtain a glass product.

105. (Previously Presented) The optical glass of claim 108 wherein said optical glass comprises 0-11 percent of BaO.

106. (Previously Presented) The optical glass of claim 109 wherein said total quantity of Li_2O , Na_2O , and K_2O is equal to or more than 29 percent.

107. (Withdrawn) A method of manufacturing glass products comprising the steps of:

heating the glass preform prepared by the method claim 103; and

precisely press molding the heated glass preform to obtain a glass product.

108. (Currently Amended) An optical glass comprising, as molar percentages, 17-30 percent of P_2O_5 , 1-10 percent of B_2O_3 (where the total quantity of P_2O_5 and B_2O_3 is 18-32 percent), 5-25 percent of WO_3 , 10-23 percent of Nb_2O_5 , 1-9 percent of TiO_2 (where the total quantity of WO_3 , Nb_2O_5 and TiO_2 is 28-40 percent), 5-22 percent Li_2O , 4-22 percent Na_2O , 0.5-7 percent K_2O (where the total quantity of Li_2O , Na_2O , and K_2O is 12-38 percent), 2-23 percent of BaO , 1-10 percent of ZnO (where the total quantity of BaO and ZnO is 3-25 percent), 0-8 percent of CaO , 0-8 percent of SrO , 0-4 percent of Al_2O_3 , 0-4 percent of Y_2O_3 , 0-1 percent of Sb_2O_3 , and 0-1 percent of As_2O_3 , where the total of all of these components is not less than 94 percent, and wherein the optical glass does not comprise an amount of GeO_2 .

109. (Currently Amended) An optical glass comprising, as molar percentages, 14-32 percent of P_2O_5 , 0.5-13 percent of B_2O_3 (where the total quantity of P_2O_5 and B_2O_3 is 16-32 percent), 5-40 percent of WO_3 , 5-23 percent of Nb_2O_5 , 1-9 percent of TiO_2 (where the total quantity of WO_3 , Nb_2O_5 and TiO_2 is 25-42 percent), 5-27 percent Li_2O , 3-27 percent Na_2O , 0.5-7 percent K_2O (where the total quantity of Li_2O , Na_2O , and K_2O is 12-43 percent), 0-23 percent of BaO , 0-17 percent of ZnO (where the total quantity of BaO and ZnO is 0-25 percent), 0-8 percent of CaO , 0-8

percent of SrO, 0-4 percent of Al₂O₃, 0-4 percent of Y₂O₃, 0-1 percent of Sb₂O₃, and 0-1 percent of As₂O₃, where the total of all of these components is not less than 94 percent, and wherein the optical glass does not comprise an amount of GeO₂.

110. (Currently Amended) The optical glass of claim 108 wherein said total quantity of Li₂O, Na₂O, and K₂O is equal to or more than 29 percent.

111. (Currently Amended) A glass preform for precision press-molding composed of an optical glass comprising, as molar percentages, 15-30 percent of P₂O₅, 0.5-15 percent of B₂O₃; 5-25 percent of Nb₂O₅; 6-40 percent of WO₃; 4-45 percent of at least one R'₂O selected from the group consisting of Li₂O, Na₂O, and K₂O, 1-5 percent of K₂O; 0-30 percent (excluding 30 percent) of at least one RO selected from the group consisting of BaO, ZnO, and SrO; and 2-9 percent of TiO₂; with the total content of the above-stated components being equal to or more than 95 percent.

112. (Previously Presented) The glass preform according to claim 111, wherein the optical glass comprises 0-25 molar percent (excluding 0 molar percent) of BaO.

113. (Previously Presented) The glass preform according to claim 111, wherein the optical glass has the composition comprising, as essential components, P₂O₅, B₂O₃, WO₃, Nb₂O₅, TiO₂, BaO, ZnO, Li₂O, Na₂O, and K₂O or the composition comprising the above essential components and Sb₂O₃.

114. (Previously Presented) The glass preform according to claim 111, wherein the total quantity of Li_2O , Na_2O , and K_2O is equal to or more than 29 percent.

115. (Currently Amended) A glass preform for precision press-molding composed of an optical glass comprising, as molar percentages, 17-30 percent of P_2O_5 , 1-10 percent of B_2O_3 (where the total quantity of P_2O_5 and B_2O_3 is 18-32 percent), 5-25 percent of WO_3 , 10-23 percent of Nb_2O_5 , 1-9 percent of TiO_2 (where the total quantity of WO_3 , Nb_2O_5 and TiO_2 is 28-40 percent), 5-22 percent of Li_2O , 4-22 percent of Na_2O , 0.5-7 percent of K_2O (where the total quantity of Li_2O , Na_2O , and K_2O is 12-38 percent), 2-23 percent of BaO , 1-10 percent of ZnO (where the total quantity of BaO and ZnO is 3-25 percent), 0-8 percent of CaO , 0-8 percent of SrO , 0-4 percent of Al_2O_3 , 0-4 percent of Y_2O_3 , 0-1 percent of Sb_2O_3 , and 0-1 percent of As_2O_3 , where the total of all of these components is not less than 94 percent.

116. (Currently Amended) A glass preform for precision press-molding composed of an optical glass comprising, as molar percentages, 14-32 percent of P_2O_5 , 0.5-13 percent of B_2O_3 (where the total quantity of P_2O_5 and B_2O_3 is 16-32 percent), 5-40 percent of WO_3 , 5-23 percent of Nb_2O_5 , 1-9 percent of TiO_2 (where the total quantity of WO_3 , Nb_2O_5 and TiO_2 is 25-42 percent), 5-27 percent of Li_2O , 3-27 percent of Na_2O , 0.5-7 percent of K_2O (where the total quantity of Li_2O , Na_2O , and K_2O is 12-43 percent), 0-23 percent of BaO , 0-17 percent of ZnO (where the

total quantity of BaO and ZnO is 0-25 percent), 0-8 percent of CaO, 0-8 percent of SrO, 0-4 percent of Al₂O₃, 0-4 percent of Y₂O₃, 0-1 percent of Sb₂O₃, and 0-1 percent of As₂O₃, where the total of all of these components is not less than 94 percent.

117. (New) An optical glass comprising, as molar percentages:

12-34 percent of P₂O₅;

0.2-15 percent of B₂O₃, where the total quantity of P₂O₅ and B₂O₃ is 15-35 percent;

2-40 percent of WO₃;

0-25 percent of Nb₂O₅;

0 to 10 percent of TiO₂, where the total quantity of WO₃, Nb₂O₅ and TiO₂ is 20-45 percent;

0-25 percent of BaO;

0-20 percent of ZnO, where the total quantity of BaO and ZnO is less than 30 percent;

2-30 percent of Li₂O;

2-30 percent of Na₂O;

0-15 percent of K₂O, where the total quantity of Li₂O, Na₂O, and K₂O is 29-45 percent;

0-10 percent of CaO;

0-10 percent of SrO;

0-5 percent of Al₂O₃;

0-5 percent of Y₂O₃;

0-1 percent of Sb_2O_3 ; and

0-1 percent of As_2O_3 , where the total quantity of all of the above-listed components is equal to or more than 94 percent; and wherein said optical glass comprises, as essential components, P_2O_5 , B_2O_3 , WO_3 , Nb_2O_5 , TiO_2 , BaO , ZnO , Li_2O , Na_2O and K_2O , and does not comprises an amount of GeO_2 .

118. (New) An optical glass comprising, as molar percentages:

12-34 percent of P_2O_5 ;

0.2-15 percent of B_2O_3 , where the total quantity of P_2O_5 and B_2O_3 is 15-35 percent;

2-40 percent of WO_3 ;

0-25 percent of Nb_2O_5 ;

0 to 10 percent of TiO_2 , where the total quantity of WO_3 , Nb_2O_5 and TiO_2 is 20-45 percent;

0-11 percent of BaO ;

0-20 percent of ZnO , where the total quantity of BaO and ZnO is less than 30 percent;

2-30 percent of Li_2O ;

2-30 percent of Na_2O ;

0-15 percent of K_2O , where the total quantity of Li_2O , Na_2O and K_2O is 10-45 percent;

0-10 percent of CaO ;

0-10 percent of SrO ;

0-5 percent of Al_2O_3 ;

0-5 percent of Y_2O_3 ;

0-1 percent of Sb_2O_3 ; and

0-1 percent of As_2O_3 , where the total quantity of all of the above-listed components is equal to or more than 94 percent; and wherein said optical glass comprises, as essential components, P_2O_5 , B_2O_3 , WO_3 , Nb_2O_5 , TiO_2 , BaO , ZnO , Li_2O , Na_2O and K_2O , and does not comprises an amount of GeO_2 .

119. (New) The optical glass of claim 117 wherein said optical glass comprises Sb_2O_3 .

120. (New) The optical glass of claim 118 wherein said optical glass comprises Sb_2O_3 .

121 (New) The optical glass of claim 117 wherein the content of TiO_2 is 2 percent or more.

122. (New) The optical glass of claim 117 wherein the content of K_2O is 1 percent of more.

123. (New) The optical glass of claim 118 wherein the content of TiO_2 is 2 percent or more.

124. (New) The optical glass of claim 118 wherein the content of K_2O is 1 percent of more.

125. (New) An optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, and a viscosity at the liquid phase temperature equal to or higher than 0.4 Pa·s, wherein said optical glass has a composition comprising, as essential components, P_2O_5 , B_2O_3 , WO_3 , TiO_2 , and K_2O , does not comprise substantial amount of GeO_2 , and comprises, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 ; 0-25 percent of Nb_2O_5 ; 0-40 percent (excluding 0 percent) of WO_3 ; 2-10 percent of TiO_2 ; 4-45 percent of at least one R'_2O selected from the group consisting of Li_2O , Na_2O , and K_2O where the quantity of K_2O is 1-15 percent; and 0-30 percent (excluding 30 percent) of at least one RO selected from the group consisting of BaO , ZnO , and SrO ; with the total content of the above-stated components being equal to or more than 94 percent.

126. (New) An optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, and a glass transition temperature equal to or less than 540°C. wherein said optical glass has a composition comprising, as essential components, P_2O_5 , B_2O_3 , WO_3 , TiO_2 , and K_2O , does not comprise substantial amount of GeO_2 ; and comprises, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 ; 0-25 percent of Nb_2O_5 ; 0-40 percent (excluding 0 percent) of WO_3 ; 2-10 percent of TiO_2 ; 4-45 percent of at least one R'_2O selected from the group consisting of Li_2O , Na_2O , and K_2O where the quantity of K_2O is 1-15 percent; and 0-30 percent (excluding 30 percent) of at least

one RO selected from the group consisting of BaO, ZnO, and SrO; with the total content of the above-stated components being equal to or more than 94 percent.

127. (New) An optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, and a transmittance λ_{80} equal to or less than 500 nm and a transmittance λ_5 equal to or less than 385nm, wherein said optical glass has a composition comprising, as essential components, P_2O_5 , B_2O_3 , WO_3 , and TiO_2 , does not comprise substantial amount of GeO_2 , and comprises, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 ; 0-25 percent of Nb_2O_5 ; 0-40 percent (excluding 0 percent) of WO_3 ; 2-10 percent of TiO_2 ; 4-45 percent of at least one R'_2O selected from the group consisting of Li_2O , Na_2O , and K_2O ; and 0-30 percent (excluding 30 percent) of at least one RO selected from the group consisting of BaO, ZnO, and SrO; with the total content of the above-stated components being equal to or more than 94 percent.

128. (New) An optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, a liquid phase temperature equal to or less than 970°C, and a transmittance λ_{80} equal to or less than 500 nm and a transmittance λ_5 equal to or less than 385nm, wherein said optical glass has a composition comprising, as essential components, P_2O_5 , B_2O_3 , WO_3 , and TiO_2 , does not comprise substantial amount of GeO_2 , and comprises, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 ; 0-25 percent of Nb_2O_5 ; 0-40 percent (excluding 0 percent) of WO_3 ; 2-10 percent of TiO_2 ; 4-45 percent of at least one R'_2O selected from the group consisting of Li_2O , Na_2O , and

K₂O; and 0-30 percent (excluding 30 percent) of at least one RO selected from the group consisting of BaO, ZnO, and SrO; with the total content of the above-stated components being equal to or more than 94 percent.

129. (New) An optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, a liquid phase temperature equal to or less than 970°C, and a transmittance λ_{80} equal to or less than 500 nm and a transmittance λ_5 equal to or less than 385nm, wherein said optical glass has a composition comprising, as essential components, P₂O₅, B₂O₃, WO₃, TiO₂ and K₂O, does not comprise substantial amount of GeO₂, and comprises, as molar percentages, 12-34 percent of P₂O₅; 0.2-15 percent of B₂O₃; 0-25 percent of Nb₂O₅; 0-40 percent (excluding 0 percent) of WO₃; 2-10 percent of TiO₂; 4-45 percent of at least one R'₂O selected from the group consisting of Li₂O, Na₂O, and K₂O where the quantity of K₂O is 1-15 percent; and 0-30 percent (excluding 30 percent) of at least one RO selected from the group consisting of BaO, ZnO, and SrO; with the total content of the above-stated components being equal to or more than 94 percent.

130. (New) An optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, and a viscosity at the liquid phase temperature equal to or higher than 0.4 Pa•s, wherein said optical glass has a composition comprising, as essential components, P₂O₅, B₂O₃, WO₃, TiO₂, and K₂O, does not comprise substantial amount of GeO₂, and comprises, as molar percentages, 12-34 percent of P₂O₅; 0.2-15 percent of B₂O₃ where the total quantity

of P_2O_5 and B_2O_3 is 15-35 percent; 0-40 percent (excluding 0 percent) of WO_3 ; 0-25 percent of Nb_2O_5 ; 2 to 10 percent of TiO_2 where the total quantity of WO_3 , Nb_2O_5 , and TiO_2 is 20-45 percent; 0-25 percent of BaO ; 0-20 percent of ZnO where the total quantity of BaO and ZnO is less than 30 percent; 2-30 percent of Li_2O ; 2-30 percent of Na_2O ; 1-15 percent of K_2O where the total quantity of Li_2O , Na_2O , and K_2O is 10-45 percent; 0-10 percent of CaO ; 0-10 percent of SrO ; 0-5 percent of Al_2O_3 ; 0-5 percent of Y_2O_3 ; 0-1 percent of Sb_2O_3 ; and 0-1 percent of As_2O_3 ; where the total quantity of all of the above-listed components is equal to or more than 94 percent.

131. (New) An optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, and a glass transition temperature equal to or less than $540^{\circ}C$, wherein said optical glass has a composition comprising, as essential components, P_2O_5 , B_2O_3 , WO_3 , TiO_2 , and K_2O , does not comprise substantial amount of GeO_2 , and comprises, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 where the total quantity of P_2O_5 and B_2O_3 is 15-35 percent; 0-40 percent (excluding 0 percent) of WO_3 ; 0-25 percent of Nb_2O_5 ; 2 to 10 percent of TiO_2 where the total quantity of WO_3 , Nb_2O_5 , and TiO_2 is 20-45 percent; 0-25 percent of BaO ; 0-20 percent of ZnO where the total quantity of BaO and ZnO is less than 30 percent; 2-30 percent of Li_2O ; 2-30 percent of Na_2O ; 1-15 percent of K_2O where the total quantity of Li_2O , Na_2O , and K_2O is 10-45 percent; 0-10 percent of CaO ; 0-10 percent of SrO ; 0-5 percent of Al_2O_3 ; 0-5 percent of Y_2O_3 ; 0-1 percent of Sb_2O_3 ; and 0-1 percent of As_2O_3 ; where the total quantity of all of the above-listed components is equal to or more than 94 percent.

132. (New) An optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, and a transmittance λ_{80} equal to or less than 500 nm and a transmittance λ_5 equal to or less than 385 nm, wherein said optical glass has a composition comprising, as essential components, P_2O_5 , B_2O_3 , WO_3 , and TiO_2 , does not comprise substantial amount of GeO_2 , and comprises, as molar percentages, 12-34 percent of P_2O_5 , 0.2-15 percent of B_2O_3 where the total quantity of P_2O_5 and B_2O_3 is 15-35 percent; 0-40 percent excluding 0 percent of WO_3 ; 0-25 percent of Nb_2O_5 ; 2 to 10 percent of TiO_2 where the total quantity of WO_3 , Nb_2O_5 , and TiO_2 is 20-45 percent; 0-25 percent of BaO ; 0-20 percent of ZnO where the total quantity of BaO and ZnO is less than 30 percent; 2-30 percent of Li_2O ; 2-30 percent of Na_2O ; 0-15 percent of K_2O where the total quantity of Li_2O , Na_2O , and K_2O is 10-45 percent; 0-10 percent of CaO ; 0-10 percent of SrO ; 0-5 percent of Al_2O_3 ; 0-5 percent of Y_2O_3 ; 0-1 percent of Sb_2O_3 ; and 0-1 percent of As_2O_3 ; where the total quantity of all of the above-listed components is equal to or more than 94 percent.

133. (New) An optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, a liquid phase temperature equal to or less than 970°C, and a transmittance λ_{80} equal to or less than 500 nm and a transmittance λ_5 equal to or less than 385 nm, wherein said optical glass has a composition comprising, as essential components, P_2O_5 , B_2O_3 , WO_3 , and TiO_2 , does not comprise substantial amount of GeO_2 , and comprises, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 where the total quantity of P_2O_5 and B_2O_3 is 15-35 percent; 0-40 percent excluding 0 percent of

WO₃; 0-25 percent of Nb₂O₅; 2 to 10 percent of TiO₂ where the total quantity of WO₃, Nb₂O₅, and TiO₂ is 20-45 percent; 0-25 percent of BaO; 0-20 percent of ZnO where the total quantity of BaO and ZnO is less than 30 percent; 2-30 percent of Li₂O; 2-30 percent of Na₂O; 0-15 percent of K₂O where the total quantity of Li₂O, Na₂O, and K₂O is 10-45 percent; 0-10 percent of CaO; 0-10 percent of SrO; 0-5 percent of Al₂O₃; 0-5 percent of Y₂O₃; 0-1 percent of Sb₂O₃; and 0-1 percent of As₂O₃; where the total quantity of all of the above-listed components is equal to or more than 94 percent.

134. (New) An optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, a liquid phase temperature equal to or less than 970°C, and a transmittance λ₈₀ equal to or less than 500 nm and a transmittance λ₅ equal to or less than 385 nm, wherein said optical glass has the composition comprising, as essential components, P₂O₅, B₂O₃, WO₃, TiO₂ and K₂O, does not comprise substantial amount of GeO₂, and comprises, as molar percentages, 12-34 percent of P₂O₅; 0.2-15 percent of B₂O₃ where the total quantity of P₂O₅ and B₂O₃ is 15-35 percent; 0-40 percent excluding 0 percent of WO₃; 0-25 percent of Nb₂O₅; 2 to 10 percent of TiO₂ where the total quantity of WO₃, Nb₂O₅, and TiO₂ is 20-45 percent; 0-25 percent of BaO; 0-20 percent of ZnO where the total quantity of BaO and ZnO is less than 30 percent; 2-30 percent of Li₂O; 2-30 percent of Na₂O; 1-15 percent of K₂O where the total quantity of Li₂O, Na₂O, and K₂O is 10-45 percent; 0-10 percent of CaO; 0-10 percent of SrO; 0-5 percent of Al₂O₃; 0-5 percent of Y₂O₃; 0-1 percent of Sb₂O₃; and 0-1 percent of As₂O₃; where

the total quantity of all of the above-listed components is equal to or more than 94 percent.

135. (New) An optical glass having a composition comprising, as essential components, P_2O_5 , B_2O_3 , Nb_2O_5 , WO_3 , TiO_2 , and K_2O , not comprising substantial amount of GeO_2 , and comprising, as molar percentages, 15-30 percent of P_2O_5 ; 0.5-15 percent of B_2O_3 ; 5-25 percent of Nb_2O_5 ; 0-40 percent (excluding 0 percent) of WO_3 ; 2-10 percent of TiO_2 ; 4-45 percent of at least one R'_2O selected from the group consisting of Li_2O , Na_2O , and K_2O where the quantity of K_2O is 1-15 percent; and 0-30 percent (excluding 30 percent) of at least one RO selected from among BaO , ZnO , and SrO ; with the total content of the above-stated components being equal to or more than 95 percent.

136. (New) An optical glass having a composition comprising, as essential components, P_2O_5 , B_2O_3 , Nb_2O_5 , WO_3 , TiO_2 , and K_2O , not comprising substantial amount of GeO_2 , and comprising, as molar percentages, 15-30 percent of P_2O_5 ; 0.5-15 percent of B_2O_3 ; 5-25 percent of Nb_2O_5 ; 0-40 percent (excluding 0 percent) of WO_3 ; not more than 10 percent of TiO_2 ; 4-45 percent of at least one R'_2O selected from the group consisting of Li_2O , Na_2O , and K_2O where the quantity of K_2O is 1-15 percent; and 0-30 percent (excluding 0 percent and 30 percent) of at least one RO selected from the group consisting of BaO , ZnO , and SrO .

137. (New) An optical glass comprising, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 where the total quantity of P_2O_5 and B_2O_3 is 15-35

percent; 2-40 percent of WO_3 ; 0-25 percent of Nb_2O_5 ; 2 to 10 percent of TiO_2 where the total quantity of WO_3 , Nb_2O_5 , and TiO_2 is 20-45 percent; 0-25 percent of BaO ; 0-20 percent of ZnO where the total quantity of BaO and ZnO is less than 30 percent; 2-30 percent of Li_2O ; 2-30 percent of Na_2O ; 1-15 percent of K_2O where the total quantity of Li_2O , Na_2O , and K_2O is 29-45 percent; 0-10 percent of CaO ; 0-10 percent of SrO ; 0-5 percent of Al_2O_3 ; 0-5 percent of Y_2O_3 ; 0-1 percent of Sb_2O_3 ; and 0-1 percent of As_2O_3 ; where the total quantity of all of the above-listed components is equal to or more than 94 percent, as well as not comprising a substantial amount of GeO_2 .

138. (New) An optical glass comprising, as molar percentage, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 where the total quantity of P_2O_5 and B_2O_3 is 15-35 percent; 2-40 percent of WO_3 ; 0-25 percent of Nb_2O_5 ; 2 to 10 percent of TiO_2 where the total quantity of WO_3 , Nb_2O_5 , and TiO_2 is 20-45 percent; 0-11 percent of BaO ; 0-20 percent of ZnO where the total quantity of BaO and ZnO is less than 30 percent; 2-30 percent of Li_2O ; 2-30 percent of Na_2O ; 1-15 percent of K_2O where the total quantity of Li_2O , Na_2O , and K_2O is 10-45 percent; 0-10 percent of CaO ; 0-10 percent of SrO ; 0-5 percent of Al_2O_3 ; 0-5 percent of Y_2O_3 ; 0-1 percent of Sb_2O_3 ; and 0-1 percent of As_2O_3 ; where the total quantity of all of the above-listed components is equal to or more than 94 percent, as well as not comprising a substantial amount of GeO_2 .

139. (New) An optical glass having a composition comprising, as essential components, P_2O_5 , B_2O_3 , WO_3 , Nb_2O_5 , TiO_2 , BaO , ZnO , Li_2O , Na_2O and K_2O or the

composition comprising the above essential components and Sb_2O_3 , and comprising, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 where the total quantity of P_2O_5 and B_2O_3 is 15-35 percent; 2-40 percent of WO_3 ; 0-25 percent (excluding 0 percent) of Nb_2O_5 ; 0 to 10 percent of TiO_2 where the total quantity of WO_3 , Nb_2O_5 , and TiO_2 is 20-45 percent; 0-25 percent (excluding 0 percent) of BaO ; 0-20 percent (excluding 0 percent) of ZnO where the total quantity of BaO and ZnO is less than 30 percent; 2-30 percent of Li_2O ; 2-30 percent of Na_2O ; 0-15 percent (excluding 0 percent) of K_2O where the total quantity of Li_2O , Na_2O , and K_2O is 29-45 percent; and 0-1 percent of Sb_2O_3 .

140. (New) An optical glass having a composition comprising, as essential components, P_2O_5 , B_2O_3 , WO_3 , Nb_2O_5 , TiO_2 , BaO , ZnO , Li_2O , Na_2O and K_2O or the composition comprising the above essential components and Sb_2O_3 , and comprising, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 where the total quantity of P_2O_5 and B_2O_3 is 15-35 percent; 2-40 percent of WO_3 ; 0-25 percent (excluding 0 percent) of Nb_2O_5 ; 0 to 10 percent (excluding 0 percent) of TiO_2 , where the total quantity of WO_3 , Nb_2O_5 , and TiO_2 is 20-45 percent; 0-11 percent (excluding 0 percent) of BaO ; 0-20 percent (excluding 0 percent) of ZnO where the total quantity of BaO and ZnO is less than 30 percent; 2-30 percent of Li_2O ; 2-30 percent of Na_2O ; 0-15 percent (excluding 0 percent) of K_2O where the total quantity of Li_2O , Na_2O , and K_2O is 10-45 percent; and 0-1 percent of Sb_2O_3 .

141. (New) A precision press molding glass preform composed of the optical glass of claim 125.

142. (New) A precision press molding glass preform composed of the optical glass of claim 126.

143. (New) A precision press molding glass preform composed of the optical glass of claim 127.

144. (New) A precision press molding glass preform composed of the optical glass of claim 128.

145. (New) A precision press molding glass preform composed of the optical glass of claim 129.

146. (New) A precision press molding glass preform composed of the optical glass of claim 130.

147. (New) A precision press molding glass preform composed of the optical glass of claim 131.

148. (New) A precision press molding glass preform composed of the optical glass of claim 132.

149. (New) A precision press molding glass preform composed of the optical glass of claim 133.

150. (New) A precision press molding glass preform composed of the optical glass of claim 134.

151. (New) A precision press molding glass preform composed of the optical glass of claim 135.

152. (New) A precision press molding glass preform composed of the optical glass of claim 136.

153. (New) A precision press molding glass preform composed of the optical glass of claim 137.

154. (New) A precision press molding glass preform composed of the optical glass of claim 138.

155. (New) A precision press molding glass preform composed of the optical glass of claim 139.

156. (New) A precision press molding glass preform composed of the optical glass of claim 140.

157. (New) A precision press molding glass preform composed of an optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number

in the range of from 20 to 28.5, and a viscosity at the liquid phase temperature equal to or higher than 0.4 Pa s, wherein said optical glass has a composition comprising, as essential components, P_2O_5 , B_2O_3 , TiO_2 , Li_2O , Na_2O , and K_2O and comprises, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 ; 0-25 percent of Nb_2O_5 ; 0-40 percent of WO_3 ; 2-10 percent of TiO_2 ; 4-45 percent of at least one R'_2O selected from the group consisting of Li_2O , Na_2O , and K_2O where the quantity of Li_2O is 2-30 percent, the quantity of Na_2O is 2-30 percent, and the quantity of K_2O is 1-15 percent; and 0-30 percent (excluding 30 percent) of at least one RO selected from the group consisting of BaO , ZnO , and SrO ; with the total content of the above-stated components being equal to or more than 94 percent.

158. (New) A precision press molding glass preform composed of an optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, and a glass transition temperature equal to or less than 540°C, wherein said optical glass has a composition comprising, as essential components, P_2O_5 , B_2O_3 , TiO_2 , Li_2O , Na_2O and K_2O and comprises, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 ; 0-25 percent of Nb_2O_5 ; 0-40 percent of WO_3 ; 2-10 percent of TiO_2 ; 4-45 percent of at least one R'_2O selected from the group consisting of Li_2O , Na_2O , and K_2O where the quantity of Li_2O is 2-30 percent, the quantity of Na_2O is 2-30 percent, and the quantity of K_2O is 1-15 percent; and 0-30 percent (excluding 30 percent) of at least one RO selected from the group consisting of BaO , ZnO , and SrO ; with the total content of the above-stated components being equal to or more than 94 percent.

159. (New) A precision press molding glass preform composed of an optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, and a transmittance λ_{80} is equal to or less than 500nm and a transmittance λ_5 is equal to or less than 385nm, wherein said optical glass has a composition comprising, as essential components, P_2O_5 , B_2O_3 , TiO_2 , Li_2O , and Na_2O , and comprises, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 ; 0-25 percent of Nb_2O_5 ; 0-40 percent of WO_3 ; 2-10 percent of TiO_2 ; 4-45 percent of at least one R'_2O selected from the group consisting of Li_2O , Na_2O , and K_2O where the quantity of Li_2O is 2-30 percent, the quantity of Na_2O is 2-30 percent, and the quantity of K_2O is 0-15 percent; and 0-30 percent (excluding 30 percent) of at least one RO selected from the group consisting of BaO, ZnO, and SrO; with the total content of the above-stated components being equal to or more than 94 percent.

160. (New) A precision press molding glass preform composed of an optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, a liquid phase temperature equal to or less than 970°C, and a transmittance λ_{80} is equal to or less than 500nm and a transmittance λ_5 is equal to or less than 385nm, wherein said optical glass has a composition comprising, as essential components, P_2O_5 , B_2O_3 , TiO_2 , Li_2O , and Na_2O , and comprises, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 ; 0-25 percent of Nb_2O_5 ; 0-40 percent of WO_3 ; 2-10 percent of TiO_2 ; 4-45 percent of at least one R'_2O selected from the group consisting of Li_2O , Na_2O , and K_2O where the quantity of Li_2O is 2-30 percent, the quantity of Na_2O is 2-30 percent, and the

quantity of K_2O is 0-15 percent); and 0-30 percent (excluding 30 percent) of at least one RO selected from the group consisting of BaO, ZnO, and SrO; with the total content of the above-stated components being equal to or more than 94 percent.

161. (New) A precision press molding glass preform composed of an optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, and a transmittance λ_{80} is equal to or less than 500nm and a transmittance λ_5 is equal to or less than 385nm, wherein said optical glass has a composition comprising, as essential components, P_2O_5 , B_2O_3 , TiO_2 , Li_2O , Na_2O , and K_2O , and comprises, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 ; 0-25 percent of Nb_2O_5 ; 0-40 percent of WO_3 ; 2-10 percent of TiO_2 ; 4-45 percent of at least one R'_2O selected from the group consisting of Li_2O , Na_2O , and K_2O where the quantity of Li_2O is 2-30 percent, the quantity of Na_2O is 2-30 percent, and the quantity of K_2O is 1-15 percent; and 0-30 percent (excluding 30 percent) of at least one RO selected from the group consisting of BaO, ZnO, and SrO; with the total content of the above-stated components being equal to or more than 94 percent.

162. (New) A precision press molding glass preform composed of an optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, and a viscosity at the liquid phase temperature equal to or higher than 0.4 Pa s, wherein said optical glass has a composition comprising, as essential components, P_2O_5 , B_2O_3 , TiO_2 , Li_2O , Na_2O , and K_2O , and comprises, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 where the total

quantity of P_2O_5 and B_2O_3 is 15-35 percent; 0-40 percent of WO_3 ; 0-25 percent of Nb_2O_5 ; 2-10 percent of TiO_2 where the total quantity of WO_3 , Nb_2O_5 , and TiO_2 is 20-45 percent; 0-25 percent of BaO ; 0-20 percent of ZnO where the total quantity of BaO and ZnO is less than 30 percent; 2-30 percent of Li_2O ; 2-30 percent of Na_2O ; 1-15 percent of K_2O where the total quantity of Li_2O , Na_2O , and K_2O is 10-45 percent; 0-10 percent of CaO ; 0-10 percent of SrO ; 0-5 percent of Al_2O_3 ; 0-5 percent of Y_2O_3 ; 0-1 percent of Sb_2O_3 ; and 0-1 percent of As_2O_3 ; where the total quantity of all of the above-listed components is equal to or more than 94 percent.

163. (New) A precision press molding glass preform composed of an optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, and a glass transition temperature equal to or less than $540^{\circ}C$, wherein said optical glass has a composition comprising, as essential components, P_2O_5 , B_2O_3 , TiO_2 , Li_2O , Na_2O , and K_2O , and comprises, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 where the total quantity of P_2O_5 and B_2O_3 is 15-35 percent; 0-40 percent of WO_3 ; 0-25 percent of Nb_2O_5 ; 2-10 percent of TiO_2 where the total quantity of WO_3 , Nb_2O_5 , and TiO_2 is 20-45 percent; 0-25 percent of BaO ; 0-20 percent of ZnO where the total quantity of BaO and ZnO is less than 30 percent; 2-30 percent of Li_2O ; 2-30 percent of Na_2O ; 1-15 percent of K_2O where the total quantity of Li_2O , Na_2O , and K_2O is 10-45 percent; 0-10 percent of CaO ; 0-10 percent of SrO ; 0-5 percent of Al_2O_3 ; 0-5 percent of Y_2O_3 ; 0-1 percent of Sb_2O_3 ; and 0-1 percent of As_2O_3 ; where the total quantity of all of the above-listed components is equal to or more than 94 percent.

164. (New) A precision press molding glass preform composed of an optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, and a transmittance λ_{80} is equal to or less than 500nm and a transmittance λ_5 is equal to or less than 385nm, wherein said optical glass has a composition comprising, as essential components, P_2O_5 , B_2O_3 , TiO_2 , Li_2O , and Na_2O , and comprises, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 where the total quantity of P_2O_5 and B_2O_3 is 15-35 percent; 0-40 percent (excluding 0 percent) of WO_3 ; 0-25 percent of Nb_2O_5 ; 2-10 percent of TiO_2 where the total quantity of WO_3 , Nb_2O_5 , and TiO_2 is 20-45 percent; 0-25 percent of BaO ; 0-20 percent of ZnO where the total quantity of BaO and ZnO is less than 30 percent; 2-30 percent of Li_2O ; 2-30 percent of Na_2O ; 0-15 percent of K_2O where the total quantity of Li_2O , Na_2O , and K_2O is 10-45 percent; 0-10 percent of CaO ; 0-10 percent of SrO ; 0-5 percent of Al_2O_3 ; 0-5 percent of Y_2O_3 ; 0-1 percent of Sb_2O_3 ; and 0-1 percent of As_2O_3 ; where the total quantity of all of the above-listed components is equal to or more than 94 percent.

165. (New) A precision press molding glass preform composed of an optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, a liquid phase temperature equal to or less than 970°C, and a transmittance λ_{80} is equal to or less than 500nm and a transmittance λ_5 is equal to or less than 385nm, wherein said optical glass has a composition comprising, as essential components, P_2O_5 , B_2O_3 , TiO_2 , Li_2O , and Na_2O , and comprises, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 where the total quantity of P_2O_5 and B_2O_3 is 15-35 percent; 0-40 percent (excluding 0

percent) of WO_3 ; 0-25 percent of Nb_2O_5 ; 2-10 percent of TiO_2 where the total quantity of WO_3 , Nb_2O_5 , and TiO_2 is 20-45 percent; 0-25 percent of BaO ; 0-20 percent of ZnO where the total quantity of BaO and ZnO is less than 30 percent; 2-30 percent of Li_2O ; 2-30 percent of Na_2O ; 0-15 percent of K_2O where the total quantity of Li_2O , Na_2O , and K_2O is 10-45 percent; 0-10 percent of CaO ; 0-10 percent of SrO ; 0-5 percent of Al_2O_3 ; 0-5 percent of Y_2O_3 ; 0-1 percent of Sb_2O_3 ; and 0-1 percent of As_2O_3 ; where the total quantity of all of the above-listed components is equal to or more than 94 percent.

166. (New) A precision press molding glass preform composed of an optical glass exhibiting a refractive index in the range of from 1.75 to 2.0, an Abbé number in the range of from 20 to 28.5, a liquid phase temperature equal to or less than 970°C , and a transmittance λ_{80} is equal to or less than 500nm and a transmittance λ_5 is equal to or less than 385nm, wherein said optical glass has a composition comprising, as essential components, P_2O_5 , B_2O_3 , TiO_2 , Li_2O , Na_2O , and K_2O and comprises, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 where the total quantity of P_2O_5 and B_2O_3 is 15-35 percent; 0-40 percent (excluding 0 percent) of WO_3 ; 0-25 percent of Nb_2O_5 ; 2-10 percent of TiO_2 where the total quantity of WO_3 , Nb_2O_5 , and TiO_2 is 20-45 percent; 0-25 percent of BaO ; 0-20 percent of ZnO where the total quantity of BaO and ZnO is less than 30 percent; 2-30 percent of Li_2O ; 2-30 percent of Na_2O ; 1-15 percent of K_2O where the total quantity of Li_2O , Na_2O , and K_2O is 10-45 percent; 0-10 percent of CaO ; 0-10 percent of SrO ; 0-5 percent of Al_2O_3 ; 0-5 percent of Y_2O_3 ; 0-1 percent of Sb_2O_3 ; and 0-1

percent of As_2O_3 ; where the total quantity of all of the above-listed components is equal to or more than 94 percent.

167. (New) A precision press molding glass preform composed of an optical glass having a composition comprising, as essential components, P_2O_5 , B_2O_3 , Nb_2O_5 , TiO_2 , Li_2O , Na_2O , and K_2O and comprising, as molar percentages, 15-30 percent of P_2O_5 ; 0.5-15 percent of B_2O_3 ; 5-25 percent of Nb_2O_5 ; 0-40 percent of WO_3 ; 2-10 percent of TiO_2 ; 4-45 percent of at least one $\text{R}'_2\text{O}$ selected from the group consisting of Li_2O , Na_2O , and K_2O where the quantity of Li_2O is 2-30 percent, the quantity of Na_2O is 2-30 percent, and the quantity of K_2O is 1-15 percent; and 0-30 percent (excluding 30 percent) of at least one RO selected from the group consisting of BaO , ZnO , and SrO ; with the total content of the above-stated components being equal to or more than 95 percent.

168. (New) A precision press molding glass preform composed of an optical glass exhibiting a refractive index in the range of from 1.80 to 2.0 and an Abbé number in the range of from 20 to 32, wherein said optical glass has a composition comprising, as essential components, P_2O_5 , B_2O_3 , Nb_2O_5 , WO_3 , TiO_2 , Li_2O , Na_2O , and K_2O , and comprises, as molar percentages, 15-30 percent of P_2O_5 ; 0.5-15 percent of B_2O_3 ; 5-25 percent of Nb_2O_5 ; 0-40 percent (excluding 0 percent) of WO_3 ; not more than 10 percent of TiO_2 ; 4-45 percent of at least one $\text{R}'_2\text{O}$ selected from the group consisting of Li_2O , Na_2O , and K_2O where the quantity of Li_2O is 2-30 percent, the quantity of Na_2O is 2-30 percent, and the quantity of K_2O is 1-15 percent; and 0-

30 percent (excluding 0 percent and 30 percent) of at least one RO selected from the group consisting of BaO, ZnO, and SrO.

169. (New) A precision press molding glass preform composed of an optical glass comprising, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 where the total quantity of P_2O_5 and B_2O_3 is 15-35 percent; 2-40 percent of WO_3 ; 0-25 percent of Nb_2O_5 ; 2-10 percent of TiO_2 where the total quantity of WO_3 , Nb_2O_5 , and TiO_2 is 20-45 percent; 0-25 percent of BaO; 0-20 percent of ZnO where the total quantity of BaO and ZnO is less than 30 percent; 2-30 percent of Li_2O ; 2-30 percent of Na_2O ; 1-15 percent of K_2O where the total quantity of Li_2O , Na_2O , and K_2O is 29-45 percent; 0-10 percent of CaO; 0-10 percent of SrO; 0-5 percent of Al_2O_3 ; 0-5 percent of Y_2O_3 ; 0-1 percent of Sb_2O_3 ; and 0-1 percent of As_2O_3 ; where the total quantity of all of the above-listed components is equal to or more than 94 percent.

170. (New) A precision press molding glass preform composed of an optical glass comprising, as molar percentages, 12-34 percent of P_2O_5 ; 0.2-15 percent of B_2O_3 where the total quantity of P_2O_5 and B_2O_3 is 15-35 percent; 2-40 percent of WO_3 ; 0-25 percent of Nb_2O_5 ; 2-10 percent of TiO_2 where the total quantity of WO_3 , Nb_2O_5 , and TiO_2 is 20-45 percent; 0-11 percent of BaO; 0-20 percent of ZnO where the total quantity of BaO and ZnO is less than 30 percent; 2-30 percent of Li_2O ; 2-30 percent of Na_2O ; 1-15 percent of K_2O where the total quantity of Li_2O , Na_2O , and K_2O is 10-45 percent; 0-10 percent of CaO; 0-10 percent of SrO; 0-5 percent of Al_2O_3 ; 0-5 percent of Y_2O_3 ; 0-1 percent of Sb_2O_3 ; and 0-1 percent of As_2O_3 ; where

the total quantity of all of the above-listed components is equal to or more than 94 percent.

171. (New) An optical part composed of the optical glass of claim 125.

172. (New) An optical part composed of the optical glass of claim 126.

173. (New) An optical part composed of the optical glass of claim 127.

174. (New) An optical part composed of the optical glass of claim 128.

175. (New) An optical part composed of the optical glass of claim 129.

176. (New) An optical part composed of the optical glass of claim 130.

177. (New) An optical part composed of the optical glass of claim 131.

178. (New) An optical part composed of the optical glass of claim 132.

179. (New) An optical part composed of the optical glass of claim 133.

180. (New) An optical part composed of the optical glass of claim 134.

181. (New) An optical part composed of the optical glass of claim 135.

182. (New) An optical part composed of the optical glass of claim 136.

183. (New) An optical part composed of the optical glass of claim 137.

184. (New) An optical part composed of the optical glass of claim 138.

185. (New) An optical part composed of the optical glass of claim 139.

186. (New) An optical part composed of the optical glass of claim 140.

187. (New) An optical part prepared by precisely press molding the precision press molding glass preform of claim 141.

188. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 142.

189. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 143.

190. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 144.

191. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 145.

192. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 146.

193. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 147.

194. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 148.

195. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 149.

196. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 150.

197. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 151.

198. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 152.

199. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 153.

200. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 154.

201. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 155.

202. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 156.

203. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 157.

204. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 158.

205. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 159.

206. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 160.

207. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 161.

208. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 162.

209. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 163.

210. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 164.

211. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 165.

212. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 166.

213. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 167.

214. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 168.

215. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 169.

216. (New) An optical part prepared by precisely press molding the precision press molding preform glass of claim 170.